
WIND TURBINE GUIDELINES ADVISORY COMMITTEE MEETING

Savoy Suites
2505 Wisconsin Avenue, Northwest
Washington, DC 20007

September 20-21, 2011

ATTENDEES

U.S. Department of the Interior

David Hayes	Deputy Secretary
Steve Black	Counselor to the Secretary
Michael Bean	Counselor to the Assistant Secretary for Fish, Wildlife, and Parks

U.S. Fish and Wildlife Service

Dan Ashe	Director
David Cottingham	Senior Advisor to the Director
Jerome Ford	Assistant Director for Migratory Birds
Jeff Underwood	Deputy Assistant Director for Fisheries and Habitat Conservation

Committee Members

Taber Allison	Mass Audubon
Dick Anderson	California Energy Commission
Mike Azeka	AES Wind Generation
Kathy Boydston	Texas Parks & Wildlife Department
René Braud	EDP Renewables
Aimee Delach	Defenders of Wildlife
Sam Enfield	MAP Royalty, Inc
Steve Lindenberg	Department of Energy
Rob Manes	The Nature Conservancy
Winifred Perkins	NextEra Energy Resources
Steve Quarles	Crowell and Moring, LLP
Robert Robel	Kansas State University
Mark Sinclair	Clean Energy States Alliance
Genevieve Thompson	National Audubon Society
Patrick Traylor	Hogan Lovells, LLP

PROCESS SUPPORT

Jonathan Raab, Facilitator, Raab and Associates, LLC

MEETING PURPOSE

For the U.S. Fish and Wildlife Service (FWS) and the Federal Advisory Committee (FAC) members to provide advice and recommendations regarding revisions to the FWS revised *Draft Land-Based Wind Energy Guidelines* (Draft Guidelines), dated September 13, 2011.

MEETING OBJECTIVES

- To discuss the September 13 version of the FWS Draft Guidelines.
- To hear advice and recommendations from the FAC on effective measures to develop land-based wind energy guidelines.
- To offer the FAC members and the public an opportunity to provide comments on the FWS revised Draft Guidelines
- To inform the FAC members and the public on next steps, including how they might prepare written comments to the FWS on the revised Draft Guidelines.

U.S. FISH AND WILDLIFE SERVICE WELCOME

David Cottingham (*U.S. Fish and Wildlife Service [FWS]*), welcomed members of the Wind Turbine Guidelines Federal Advisory Committee (FAC) and thanked them for attending. He noted that the FAC Charter expires in October and this would be the last FAC meeting. There were a series of subcommittee meetings held following the July FAC meeting. The full FAC met via public teleconference August 23 and discussed the various proposals developed by the subcommittees before offering recommendations to FWS. Revisions were made to the Draft Guidelines based on public comment and on the FAC recommendations. The revised Draft Guidelines were posted online on September 13, 2011. D. Cottingham noted that FWS did not accept the FAC recommendations word for word, and would explain the rationale for doing so. D. Cottingham also noted that FWS will go to FWS Regional offices for final review. The Guidelines will then be submitted to the Office of Management and Budget (OMB) for interagency review and approval.

SERVICE PRESENTATION OF COMMENTS ON DRAFT GUIDELINES

D. Cottingham presented a summary of the major changes made in the September 13, 2011, Revised Draft Guidelines in response to public and FAC comments (See Appendix C).

D. Cottingham announced that public comment on the September 13 Draft Guidelines will be accepted until September 23, 2011. Given the need to finalize the Guidelines by the end of the year, and the extensive opportunities for public comment that have already been provided, the comment period will not be extended. D. Cottingham then asked the FAC for any clarifying questions before beginning an in-depth discussion of specific topics. Topics raised by the FAC included:

- *Clarification of FWS position on Avian and Bat Protection Plans (ABPPs).* Concerns were raised regarding a FWS ABPP guidance document that is being considered by some as mandatory. Jerome Ford (FWS) clarified that FWS is no longer using the document, as it caused confusion and was never meant to be a regulatory instrument. FWS will resolve any remaining confusion in Field Offices.
- *Clarification of Table 1, including the definition of “communicate” and what information would be made available to the public.* D. Cottingham noted that communication is meant to be two-ways between developers and FWS. Regarding information disclosure, the FWS would like to see the results of wildlife studies conducted at project sites.
- *Distributed wind energy definitions, Tier 4b, and indirect impacts.* The FAC agreed that these would be discussed in greater detail later in the meeting.

DEPUTY INTERIOR SECRETARY DAVID HAYES & FWS DIRECTOR DAN ASHE

Opening remarks (D. Hayes & D. Ashe):

D. Hayes greeted the FAC and conveyed the greetings of Secretary Salazar. He thanked the FAC for their efforts and contributions. He noted that the Department of the Interior (Department) was

looking forward to finalizing the Guidelines and expressed his desire to know the FAC's views on the new draft. D. Ashe echoed the Deputy Secretary's thanks. He noted that the Guidelines would be enduring and will be the foundation for establishing the wind energy industry sustainably in the United States.

Opening Remarks (FAC):

Rob Manes (*The Nature Conservancy, Kansas*) thanked D. Hayes and D. Ashe for their attendance. He noted that FWS has been commendable in focusing on this issue and working with the FAC. He noted that issues remain ranging from minor concerns such as carcass possession permits, to larger issues of habitat studies and communication/coordination with FWS. R. Manes stated his confidence that these issues can be resolved. He urged FWS to robustly consider the common viewpoints on these issues within the FAC and consider its recommendations. The FAC recognizes that the Guidelines are an FWS document, but in addition, the Guidelines are also the people's document.

Michael Azeka (*AES Wind Generation*) echoed his thanks to D. Hayes, D. Ashe, and the FWS, for working with the FAC. M. Azeka noted that he was encouraged that FWS would finalize the Guidelines soon and was not aware of any remaining issue that was fundamentally irresolvable. While he remains encouraged he expressed concern that federal lands have become the most expensive and risky route to pursue wind energy. He cited several reasons, including new policies and legal risks, why developers have begun to avoid federal lands. Additionally, developers have found that voluntary tools such as ABPPs, while sometimes helpful, have become required regardless of the level of risk at a proposed project.

Response (D. Hayes & D. Ashe):

D. Hayes thanked the FAC for their presentation. He agreed that the process needed to reach a conclusion and while he hoped for consensus, the important point is that FWS has the benefit of the FAC's advice. D. Hayes agreed that the Guidelines are the people's document, in that the Guidelines will set the tone for all wind energy projects in the United States. The Department and FWS are eager to get final Guidelines out to create certainty and end this period of anxiety for all parties. However, it's important to note that the Guidelines can be changed and improved as we go forward.

In response to M. Azeka's concerns, D. Hayes emphasized the Department's interest in developing renewable energy on public lands. Last year the Department approved 4,000 MW of renewable energy and plans for similar installation this year. However, there are legal requirements when managing the public's land. Where the Department is committing the public's resources, a degree of scrutiny is necessary. Likewise, taxpayers are owed appropriate rents for the use of public lands. D. Hayes indicated that he and the Secretary truly value the FAC's input and encourage responsible renewable energy development on public and private lands.

D. Ashe agreed that the process to develop energy on public lands is appropriate. The Guidelines should help bring certainty to wind energy development on public lands.

Further Discussion (FAC, D. Hayes & D. Ashe)

ABPPs: The FAC discussed ABPPs and their perceived regulatory burden for wind energy developers. Some FAC members felt that the issue was rooted in terminology. Because ABPPs are currently required by the Bureau of Land Management for wind energy projects on their lands, there is confusion when the same term is used to describe voluntary plans on private lands. There was concern that ABPPs are becoming an approval process, even on private lands.

D. Hayes stated that some projects would benefit from an ABPP, while others may not. D. Ashe stated that training on implementation of the Guidelines will be important. FWS agrees that ABPPs are voluntary on private lands. There are examples of other “plans” that FWS does not approve and have not become regulatory, e.g., Migratory Bird Conservation Plans. FWS staff are able to make the distinction between regulatory and non-regulatory plans.

Implementation: It was noted that after discussions with FWS, the most important factor in renewable energy development is the need to know the rules of the game. An ombudsman or other leadership involvement would be helpful in implementation. A hope was expressed that future guidance-developing processes for other renewable energies would be accomplished in a shorter time frame. Much of the Guidelines can be applicable to other industries.

D. Hayes responded that he agreed that the general process outlined in the Guidelines should be applicable to other forms of renewable energy development on public and private lands.

Sage grouse and prairie chickens: A concern was raised about the public’s perception that the listing of sage grouse and prairie chickens is the only way to protect it.

D. Ashe noted that FWS will protect these species on private and public lands. The species has been a candidate for listing for over 10 years and only now are conservation efforts becoming organized across state boundaries. FWS doesn’t view listing a species as the preferred way or the only way to protect a species and we hope to catalyze an effort to address this. D. Hayes agreed and added that these Guidelines will help all avian species that have potential interactions with wind turbines.

Recognition of past leaders: A FAC member acknowledged the contributions of Dave Stout, U.S. Fish and Wildlife Service, and Abby Arnold, American Wind Wildlife Institute.

Closing Remarks (D. Hayes & D. Ashe):

D. Hayes hoped the FAC would continue to provide their valuable input into this process. D. Ashe echoed D. Hayes’s appreciation and agreed that FWS needs the FAC’s and the public’s feedback on the implementation process. He thanked the FAC for their public service.

DISCUSSION OF ISSUES

Adaptive Management

Summary: Some FAC members expressed concern that adaptive management makes wind energy projects exceptionally hard to finance because of the unpredictability of adaptive management measures.

Discussion:

- Specific concerns of wind energy developers regarding adaptive management include:
 - Those applying the Guidelines must understand that adaptive management should not be commonplace.
 - The open-ended nature of adaptive management could be abused. Developers need to have an understanding of what measures may be asked of them post-construction, otherwise projects cannot be financed.
- The term “adaptive management” has different meaning to developers and to FWS, and the term is not used consistently within the draft Guidelines. For example, the glossary uses the *passive* adaptive management definition but the term as used in the Guidelines is *active* adaptive management. This leads to confusion and will need to be addressed.
- FWS field staff want wind energy developers to commit to adaptive management before the project is constructed. Developers are looking for triggers as to when adaptive management measures will be required.

Suggestions:

- Add a statement in addition to page 22 stating that adaptive management is not typically recommended across the board. Capitalize the term to send people to the glossary or refer to the definition. Further characterize adaptive management throughout the document.
- Where the Guidelines indicate concern over mitigation, identify 1) that mitigation is uncertain when there are potential significant impacts; and 2) who should be contributing to adaptive management and how.
- FWS should fund adaptive management.
- Wind energy developers should consider adaptive management “insurance”.
- Training of FWS staff is necessary. At the moment, field staff are requesting upfront mitigation and consider adaptive management later.

- Suggested rewording on Page 78, Line 27: “adaptive management *or* additional mitigation as necessary” (as opposed to “*and*”).

FWS Response (J. Ford, D. Cottingham): FWS responded that it needs to retain flexibility in how adaptive management is applied. FWS agreed that operational modifications should not generally apply when projects are well sited.

Mitigation

Summary: The FAC raised questions regarding defining mitigation and how it relates to adaptive management, and discussed how best to characterize the relationship in the Chapter 8 language.

Discussion:

- It was noted that adaptive management is a process and mitigation is an action. The Guidelines represent a “passive” adaptive management approach.
- It was noted that the Endangered Species Act separates “minimize” and “mitigate” into two distinct terms. The FAC decided to use the term “compensatory mitigation” because you could speak of minimization and mitigation as separate terms. There are sections of the Draft Guidelines where the terms are used inconsistently.
- A FAC member recalled that the FAC did not want the concept of mitigation to be constrained to the FWS 1981 Mitigation Policy definition. Page 104, lines 4-11 focus on mitigation occurring on-site. However, the same paragraph discusses starting with on-site mitigation, and then considering off-site.

Suggestions:

- It was suggested that adaptive management only be mentioned once where the term is defined and described how it should be used and how it relates to the implementation of the Guidelines. Clarify that because the tiered process is an expression of passive adaptive management, the decision made at various points throughout the process is whether or not mitigation is needed. Another FAC member suggested going back to the FAC’s original discussion of the 1981 Mitigation Policy found in the March 2010 recommendations on page 104 lines 4-11, and 17-18.
- Line 6 of the introduction: include reference to avoid, minimize, and mitigate.
- A suggestion was made to add “significant” on page 104, line 21.
- The 1981 Mitigation Policy does not address situations where species are in peril, but their habitats aren’t at risk (e.g., Indiana bat). Research into migration patterns of the Indiana bat cannot be considered mitigation according to the 1981 Policy. The Guidelines should include this type of illustrative example.

- It was suggested that Lines 13-17 be removed, but, keeping lines 4-11 is important for the states and is a succinct summary of compensatory mitigation concepts.

FWS Response (D. Cottingham): FWS agrees that adaptive management is a process as opposed to an activity. The beginning of Chapter 8 explains mitigation with the appropriate amount of detail.

Salvage Permits

Summary: Some FAC members expressed concern over the mention of salvage permits for wind energy into the Guidelines. Some members of the FAC did not see the benefit of specifically referencing these permits and not others. Additionally, some had never heard of the specific permit named in the Draft Guidelines. Concerns were raised as to how the permits and the self-reporting involved would be regarded by law enforcement officials.

Discussion:

- It was asked why salvage permits and no other permits are discussed in the document. It could appear as though it's the only permit required.
- The requirement that developers send fatality data to law enforcement officials without knowing how it is being interpreted is self-incriminating.
- It was explained that post-construction monitoring can be done without picking up carcasses. In the event that a fatality is discovered, the local game agency is typically contacted to remove the carcass.

Suggestions:

- The section could be edited to explain that if a developer plans to pick up carcasses, a permit is necessary.
- Add somewhere early in the Guidelines that "appropriate permits should be obtained".
- Remove the permit reference from the Guidelines given that the Communications Protocol includes developers sharing post-construction monitoring results.

FWS Response (J. Ford, D. Cottingham): The permit mentioned on page 73, line 24 was created as a special purpose permit for wind energy so developers can pick up carcasses. From the law enforcement standpoint, developers and FWS need to trust one another. FWS realizes that wind energy facilities are going to result in take. FWS does not intend to use information given in good faith as incriminating evidence.

Community Scale and Distributed Wind Energy

Summary: The FAC asked whether or not distributed and community scale wind energy should remain under the purview of the Guidelines, and if so, to what extent.

Discussion:

- All developers have obligations under federal law; however, distributed wind energy should not be subject to the full purview of the Guidelines.
- Tiers 1 and 2 may be reasonable for distributed wind, but the cost of Tiers 3 and 4 may become prohibitive.
- Even one poorly sited turbine could have significant wildlife impacts. Distributed wind should not be exempt from the Guidelines.

Suggestions:

- Replace “may also apply” with “would be to the benefit of”.
- Edit section to reflect that in most situations, distributed wind energy projects would only need to go through Tiers 1 or 2.
- Leave the language as is. The Guidelines are voluntary and are designed to lead to the appropriate level of evaluation.
- FWS staff and distributed generators should be trained in the appropriate applicability of the Guidelines.

FWS Response (D. Cottingham, J. Ford): The Guidelines are mainly intended for industrial scale wind energy development. FWS cannot provide an exemption from following statutory requirements. Because the Guidelines are not regulations and are voluntary, there is nothing to force those considering distributed wind energy to adhere to the Guidelines. FWS will ensure that distributed wind energy will be discussed in training.

Avian and Bat Protection Plans (ABPPs)

Summary: The FAC remained concerned with the ABPP section due to the fact that although the Guidelines refer to ABPPs as voluntary, they have been made mandatory by others in certain situations (e.g., on Bureau of Land Management land).

Discussion:

- Concern was expressed that as long as there are ABPPs that are regulatory and ABPPs that are non-regulatory, the regulatory policy is going to be applied in all cases. It's unclear whether this can be prevented from happening through training.
- It was noted that FWS routinely asks for ABPPs. Regardless of what the document is named, developers should be able to provide documentation, in whatever format, of adherence to the Guidelines.

Suggestions:

- ABPPs should have limited use and, at the earliest, should be considered after project proponents have developed a study agenda and access to the proposed site.
- Renaming the document would help, especially removal of the term “plan”.
- The document ought to describe how the developer has and will adhere to the Guidelines. On page 106, line 21, include the means by which a developer describes the documentation, as opposed to specific examples.
- Tier 2 is too early in the process to use the word ‘likely’.
- Retain elements of ABPPs in Tier 2 in the case that preliminary data show that a project site may have significant adverse impacts.

FWS Response (D. Cottingham, J. Ford): FWS could choose an alternate name for the document, but the content will remain the same. On private lands, FWS does not require developers to present a comprehensive package of documentation before you move from Tier 3 to development. However, on public lands, other agencies may have additional requirements that include FWS approval on the strategy a developer employs to mitigate for wildlife impacts, including habitat impacts. In those cases, it may behoove a developer to present such a comprehensive package for documentation purposes.

Plant Communities of Concern

Summary: The FAC discussed the inconsistent references to “plant communities of concern” throughout the Guidelines, the definition of the term, and what developers might be asked to do in cases where a project may impact “plant communities of concern”.

Discussion:

- It was noted that the second bullet under Tier 2 references plant communities that may provide habitat for species of concern. It is unclear how this section related to species of habitat fragmentation concern.
- It was noted that the Guidelines need to be consistent when discussing plant communities. The term was intended to include species of state or federal interest. The terminology is being confused between some official status for a plant, habitats that are for species, and wide-range habitats.
- A FAC member recalled that the intent was for “plant communities” to describe a collection of interactive species.
- FWS was urged to give serious consideration to this section, as it could lead to projects being abandoned. In Tier 2, the reader needs to realize that there are some communities that should be avoided as opposed to those for which compensation is a possibility.

- The term “species of concern” will capture other important plants not considered as “plant communities of concern”.

Suggestions:

- Define “plant communities of concern” in the Guidelines where it is introduced in Tier 2, Question 3.
- Return to the FAC recommendations language and leave the reference only in Tier 2, Question 3, and remove similar but inconsistent terms from the Guidelines. The question should retain reference to the Natural Heritage Database rankings.
- It is unnecessary to include plant communities of concern in Tier 4 because questions relating to avoiding or mitigating for plant communities of concern should already be answered.
- “Plant communities of concern” doesn’t need to be an official, defined term.
- Page 64, line 22: The use of the word “coordinate” in the *Role of the Service* section implies moving together in hand-in-hand. This is inconsistent with the rest of the Guidelines. “Coordinate” should be replaced with “communicate.”
- Page 61, line 11: The sentence should read, “if the indirect impacts resulted from habitat fragmentation.”

FWS Response (D. Cottingham, J. Ford): FWS will address any confusing or inconsistent use of terms related to “plant communities of concern” and will consider how that term might be defined. FWS intentionally used “coordinate” at Page 64, line 11. It is appropriate for the developer to work more closely with FWS once pre-construction studies are completed and the project is ready to move forward with construction. The process will remain developer-driven.

Eagle Conservation Plan Guidance

Summary: The FAC discussed the relationship between the Draft Eagle Conservation Plan Guidance (ECPG) and the Guidelines, and to what extent the Guidelines should reference the Draft Guidance.

Discussion:

- Page 52, lines 16-17: Some felt that it is premature to discuss the Draft ECPG in the Guidelines.
- A FAC member found it alarming to have to follow the Draft ECPG, when developers don’t yet know what the permit looks like. Developers are getting mixed messages from FWS field offices.
- A concern was raised about the ECPG requirement for seven years of monitoring. To ask a fully permitted developer to go back and do seven years of monitoring is unreasonable.

- The ECPG and the Guidelines do not align.

Suggestions:

- Remove reference to the Draft ECPG.
- If there is likely use of an area around an eagle nest, available literature should be used as opposed to the ECPG. A biological justification for the radius around the eagle nest is necessary.
- The literature for the one mile radius has already been developed with the ECPG.

FWS Response (D. Cottingham, J. Ford): If the Guidelines are to be an enduring document, they need to refer to relevant permits. The Draft ECPG is currently effective and is in use. FWS can issue Incidental Take Permits and provide information about obtaining such permits. FWS is developing training that will improve consistent implementation of the ECPG. FWS also intends to amend the regulations to extend the term of the permit from five to 30 years. Until these changes are made and training is complete, an FWS Strike Team at the national level works with FWS Regional offices to ensure that permits are issued consistently.

TIER 4a – Fatality Monitoring

Summary: The FAC discussed the fatality monitoring durations provided in Table 2. Opinions expressed included that the duration and intensity of fatality monitoring should be based on apparent risk, and that in most circumstances where there were no unanticipated significant impacts, two years of monitoring is sufficient.

Discussion:

- It was noted that the duration of monitoring depends on confidence in the monitoring. Two years should be enough if the results are consistent. If, after two years of monitoring, impacts remain that mitigation efforts haven't adequately reduced, Tier 5 studies will be the next step to experiment into how to reduce impacts.
- Another FAC member further agreed that the table locks in three years of monitoring where instead it may be best begin mitigation. The purpose of monitoring is to confirm the accuracy of predicted impacts. If the prediction was accurate, developers need to determine whether mitigation is adequate.
- It was noted that the nature of the risk is also important. For example, duration of monitoring might vary given the possibility of risk to large numbers of birds and bats, versus the possibility of take of a rare species, which might happen only once every five years.

Suggestions:

- Page 71, add citation to Strickland et. al.

- Pages 69–70 refer to risk as identified in Tier 3, but the Tier 3 decision points are framed in terms of probability rather than risk. This should be made consistent.

FWS Response (D. Cottingham): FWS agrees that the success of monitoring depends on the intensity and frequency and the subject species. There are instances where more than two years are appropriate and possibly instances where fewer years are needed.

DAY ONE PUBLIC COMMENT

Kelly Fuller (American Bird Conservancy)

The American Bird Conservancy (ABC) is interested to see that there is a new FAC member, despite the fact that we were told that the FAC would not be accepting any new members. We consider ourselves on the outside and we're watching what's going on and it will affect more people whom are not at the table. Our concerns are as follows:

- 1) Since the agency needs to wait on interagency review, extend the public comment. It looks bad and it makes FWS look bad.
- 2) ABC remains concerned about the legal assurances language. More comments will be provided after the discussion tomorrow.
- 3) Will the FWS comment on the statement about the ECPG being replaced/renamed?
- 4) How will the eagle permits be changed from five years to 30 years? Will it be a rulemaking with public comment?
- 5) Apparently people are thinking about unthinkable sites and there are irresponsible developers who are going to do bad things. We want these guidelines to prevent projects in sites that are just not good. The most effective way to deal with this is simply to not site in inappropriate places.

FWS Response: FWS will seek to change the permit duration from five to 30 years via a proposed rule that will be opened to public comment.

Mark Skolnicki (Black Swamp Bird Observatory)

We are already seeing evidence that less responsible wind companies may stain the wind industry. Small scale turbine projects in highly sensitive habitats have been an issue. There are a number of these projects that could be really bad for the reputation of the wind industry and for wildlife. There are examples of projects where there were repeated problems regardless of state involvements, because there are no standards. I agree that all developers should have to involve FWS early, at least at Tier 1 or 2. There are a few minor suggested edits that we'll propose. In the meantime, we agree that larger companies may be able to exert peer pressure to keep their peers in line in order to minimize impacts to birds and bats. We want to expand renewables, but in non-sensitive areas.

Ned Dikmen (Great Lakes Boating Federation)

I represent 4.3 million Great Lakes boaters. I also serve as a member of the Sportfishing and Boating Partnership Council (SFBPC) with the Department of the Interior. I wish to inform you of our grave concerns for the planned initiatives involving the installation of hundreds of wind turbine farms along the shores of many coastal municipalities around the Great Lakes. Even though all designs are still under review, it is our understanding that these farms will be installed within 7 miles from the shoreline of large-scale municipalities where the majority of boaters venture out from their marinas on their summer outings.

I have had some conversations with wind turbine manufacturers who seemed more than eager to pacify recreational boaters' voice of opposition to the wind turbine farms planned to be staged on Lake Erie and Lake Michigan. We have informed wind turbine manufacturers that it is not the intent of the boating community to accept piecemeal developments. This particular development should be resolved and agreed upon by the governors of all the 8 member states of the Great Lakes Basin Compact.

There is a huge body of boaters between the U.S. and Canada numbering more than 4.3 million who contribute an economic impact of \$9 billion on an annual basis. Under adverse conditions, boaters have been known to pick and abandon their mooring harbors and host cities en masse and situate elsewhere, as it happened in Chicago in mid-'80s during the Harold Washington administration. This scenario can easily happen when boaters are exposed to adverse conditions of sound and visual pollution, from the wind turbine farms in their outings.

The Great Lakes have been recognized as sanctuaries and boaters who have chosen this recreational lifestyle on these bodies of water that comes with a hefty price tag. It remains their last bastion in the arena of freedom havens, where there are no obstructions to set limits. The sound pollution, coupled with that of sight, can be very foreign and intimidating to the joy of this sport and family recreation. Another consideration is that these turbines may jeopardize the \$7 billion sport fishing industry. 73% of these boaters sportfish.

I will conclude my remarks by stating that as much as the boating community is aware of the environmental benefits in this renewable energy resource of wind turbines, they will have to be convinced that no available land is left near and adjacent to water's edge for the staging of these wind turbines on offshore locations.

DAY 2: CONTINUATION OF DISCUSSIONS OF ISSUES

TIER 4b - Habitat

Summary: The FAC discussed whether habitat monitoring should focus on species of habitat fragmentation concern or the habitats of species of concern. Some FAC members were concerned about broadening this category due to significant cost increases. Discussions included how to clarify what monitoring would be expected of developers and the scope of Tier 4b.

Discussion:

- It was noted that in Tier 4b, Questions 1 and 2 are inconsistent with the description found in the section.

- Page 80: It was noted that Question 1 is more consistent with a Tier 5 study. The question may lead readers to think a Tier 5 study is necessary.
- Page 78: It was noted that “species of concern” are mentioned, but the section goes on to discuss “species of habitat fragmentation concern”.
- Some FAC members recalled that Tier 4b was intended by the FAC to include consideration of species of habitat fragmentation concern, and not habitat for species of concern. The focus should be on those species that are most susceptible. There is no legal requirement for developers to study habitat fragmentation impacts for any non-listed species.
- The FAC discussed the list of species of habitat fragmentation concern. It was noted that the list should not be created ad hoc, but must be a pre-existing list. Others noted that the State Wildlife Action Plans would be a good starting point for such lists.

Suggestions:

- The text should be conformed to the table.
- Tier 4 should include monitoring to assess mitigation that has been conducted for significant adverse impacts.
- Page 79, line 7: Add: “if significant adverse impacts were predicted for species of concern, and a project was altered to mitigate for adverse impacts, were those efforts successful?”
- Recognize that some species may suffer habitat loss that is significant to that population, even if they aren’t species of habitat fragmentation concern.
- Page 80, line 7: Should be “species of concern”, not just federally listed species.

FWS Response (D. Cottingham): FWS split fatality monitoring and habitat fragmentation into two sections, Tiers 4a and 4b. FWS expects that in Tier 4b, the developer would conduct monitoring when species of habitat fragmentation concern are present, and explain how they have been affected. Tier 4 is designed to assess if mitigation is adequate, and if so, then Tier 5 studies should be unnecessary. FWS will seek out existing lists from state and federal agencies that discuss species affected by habitat fragmentation.

Tier 5

Summary: The FAC discussed the inconsistency between the instructions of Tier 3 and Tier 5. Some FAC members sought clarity on what studies are expected in each Tier (e.g., demographic data collection and monitoring vs. research and landscape scale monitoring).

Discussion:

- Page 78, line 24: An inconsistency was noted. The Guidelines state that Tier 4b studies should be conducted if Tier 3 studies indicate significant indirect impacts to species of concern. However, Tier 3 indicates that further studies are unnecessary unless you expect the project to have any significant impacts.

Suggestions:

- Page 83, line 27: Strike “Tier 3” and instead use “post-construction mitigation measures” because habitat fragmentation studies are not conducted in Tier 3.
- Pages 81-83 and Page 84, line 11: Pages 81-83 discuss Tier 5 studies, however Page 84 line 11 focuses on demographic effects. Clarify that developers should conduct demographic studies when appropriate. Many Tier 5 studies will not require demographic information.
- Page 84, lines 2-10: Retain the first sentence and the last two sentences as a reference to Tier 4b and remove the example on lines 4-7.

FWS Response (D. Cottingham): FWS will address the noted inconsistencies and will qualify the circumstances when demographic information is relevant.

Definitions

Summary: A number of changes were suggested in the glossary. In particular, the FAC discussed the definitions of “species of habitat fragmentation concern” and “significant”. The FAC suggested a modified version of the National Environmental Policy Act (NEPA) definition of significant.

“Species of Habitat Fragmentation Concern”

Discussion:

- Page 33, Question 5: It was one FAC member’s understanding that the FAC had recommended removing “developer or”.
- Another FAC member indicated that some federal funding requires states to have a State Wildlife Action Plan (SWAP) that includes a discussion of risks to certain species. This was supported by an attendee with the Association of Fish and Wildlife Agencies, who further indicated that SWAP species lists could be narrowed to species of habitat fragmentation concern, subject to change as new research becomes available.
- It was indicated that developers are most likely seeking an explicit list of species of habitat fragmentation concern.

Suggestions:

- Recommend using “determined” instead of “found”.
- The use of the term “independently” was important and it has been deleted in the current draft. The intent of use of the term was to avoid ad hoc findings.
- The term “independently” could also be taken to mean that states must conduct research on their own and should not be added back to the definition.
- There may need to be a method identified for updating lists as time goes on and impacts to habitat increase.

“Significant”

Discussion:

- One FAC member recalled the history of the development of the definition of “significant.” Originally, FWS indicated that they needed to follow the NEPA definition. FWS has now indicated that they can’t use the NEPA definition, however NEPA definitions are used throughout other parts of the Guidelines. The newly proposed definition, in this FAC member’s opinion, is nonsensical. There is an existing understanding of the NEPA definition through jurisprudence.
- It was opined that the NEPA definition is also unclear and not much more helpful than the newly proposed definition.
- It was noted that the newly proposed definition fails to mention who will determine significance. The lack of clarity in the definition will lead to disagreement between parties.

Suggestions:

- Retain the NEPA definition. “As it relates to species” could be added.

“Species of Concern”

Suggestions:

- Page 120, line 5: Delete second to the last word, “and”.

“Sage grouse”

Suggestions:

- Page 118, line 36: End the sentence at “grouse” – the information regarding distribution is inaccurate.

FWS Response (D. Cottingham, J. Ford): It is apparent that lists of species of habitat fragmentation concern are currently not consistently available. FWS will work with states to

develop these lists. FWS cannot use the NEPA definition of “significant” in part because it is used in the Guidelines as a modifier of impacts to species of concern, which includes federally listed species and migratory birds. NEPA is focused on significance for a variety of impacts, however the ESA and MBTA have different standards. Regional comments also note that data do not exist to determine population scale impacts for most species. The newly proposed definition describes the term as it is used in the Guidelines. However, FWS will consider use of the NEPA definition.

Best Management Practices

Suggestions:

- Page 96, lines 21-22: Add “consistent with landowner agreements” because landowner agreements sometimes require that developers not remove newly installed roads upon decommissioning.
- Page 100, line 12: In agreements with landowners, developers are typically obligated to remove foundations to 3 feet below grade so the pedestal for the turbine tower can be removed easily. This is sufficient for future agricultural use of the area.

Role of the Service (Enforcement Discretion)

Summary: A FAC subcommittee met in the morning to discuss the enforcement discretion language on pages 12 and 13. The language was then presented to the full FAC and the public for discussion. The FAC agreed to recommend the language to FWS. The full language read aloud at the meeting is as follows:

Consideration of the Guidelines in MBTA and BGEPA Enforcement

The Service urges voluntary adherence to the guidelines and communication with the Service when planning and operating a facility. While it is not possible to absolve individuals or companies from MBTA or BGEPA liability, the Office of Law Enforcement focuses its resources on investigating and prosecuting those who take migratory birds without identifying and implementing reasonable and effective measures to avoid the take. The Service will regard a developer’s or operator’s adherence to these guidelines, including communication with the Service, as appropriate means of identifying and implementing reasonable and effective measures to avoid the take of species protected under the MBTA and BGEPA. The Chief of Law Enforcement or more senior official of the Service will make any decision whether to refer for prosecution any alleged take of such species, and will take such adherence and communication fully into account when exercising discretion with respect to such potential referral. Each developer or operator will be responsible for maintaining internal records sufficient to demonstrate adherence to the guidelines and response to communications from the Service. Examples of these records could include: studies performed in the implementation of the tiered approach; an internal or external review or audit process; an avian and bat protection plan; or a wildlife management plan.

Discussion:

- A member of the subcommittee reported to the full FAC that the revised language that the subcommittee developed is language that they felt would be acceptable to the Department. The new language was read aloud.
- No concerns or further edits were raised by FAC members.

FWS Response (D. Cottingham): FWS enforces MBTA and BGEPA but this document is also a statement of fact as to how law enforcement will set up its priorities. This language urges voluntary adherence to the Guidelines, and this should be a strong signal to encourage cooperation. FWS will consider the proposed language.

Communications Protocol

Summary: The FAC discussed whether the Communications Protocol adds responsibilities to the developer. Clarity regarding the “on-ramps” language was requested.

Discussion:

- Multiple FAC members felt that the language on page 72 of the March 2010 FAC recommendations is clearer than Page 15 of the current draft Guidelines.
- It was noted that “advise project operator on study design” should mean FWS providing feedback on a plan proposed by the developer, and not the FWS developing the plan themselves.

Suggestions:

- Ensure that the text is consistent with the table in use of “communicate” versus “coordinate”.
- Page 15, line 19: Add applicable BMPs.
- Page 13, line 13: Reincorporate the language from the March 2010 FAC recommendations.
- Insert the concept of “on-ramps” before Table 1.
- Page 13, line 13: This section on voluntary adherence is limited only to projects commencing after the effective date of the Guidelines. Reinsert two lines regarding voluntary adherence from page 72 of the FAC recommendations.

FWS Response (D. Cottingham, J. Ford): FWS will clarify that the intent of the Communications Protocol is not to burden developers, but to create opportunities for collaboration. FWS will make clear that operating projects can adhere to the Guidelines should they so choose. FWS used the verb “advise” in the Communications Protocol because FWS has

the biological expertise that many companies may lack. FWS is able to provide advice or feedback on project plans.

Implementation & Training

Summary: FAC discussions included implementing a phase-in period, timing of the Guidelines' finalization, and training.

Discussion:

- It was noted that developers need time to digest and interpret the Guidelines. States and counties may adopt the Guidelines immediately. Financers of wind energy projects are going to hold developers to the Guidelines as well.
- It was also noted that the process of developing the Guidelines has been well publicized and most wind energy developers are aware that they will be coming out soon.
- Communication with FWS and preparedness to implement the Guidelines is a concern.
- It was noted that the process remains developer-driven and is not different from what developers have been doing all along. FWS already responds and provides feedback. The Guidelines are more for industry than for FWS because they provide the questions to ask and direction on how to do the work.

Suggestions:

- Training will be necessary to ensure FWS staff provide appropriate feedback. Field staff should not focus on interpreting the Guidelines, but on providing feedback and advice on the questions asked by industry.

FWS Response (D. Cottingham): The Guidelines will be implemented upon publication and training will begin within six months. It behooves all practitioners to begin using the Guidelines as soon possible. Multiple entities have offered to assist FWS with training. FWS staff are knowledgeable and will be ready to implement the Guidelines. The Communications Protocol was developed to aid the reader in ascertaining what interactions with FWS to expect. FWS will consider language changes with regard to ministerial requests.

Eagle Permits

Summary: The FAC sought clarification on what will trigger the need to seek a permit for eagle take. There was also concern that this section was misplaced in the Guidelines.

Discussion:

- Page 13, lines 3-7: Some felt the FAC recommended language more clearly distinguishes between those projects that should apply for eagle permits and those that should not. The current language on page 13, line 6, "is not anticipated," is unclear. It would be better to use the same language used in the 2009 eagle permit rule.

- Two differing concepts related to eagles that need to be harmonized were noted. First, the Guidelines say that if take is likely to occur, you should seek a permit. The Guidelines also say that if eagles are present and likely to be affected, developers should create an Eagle Conservation Plan and perhaps seek a permit.

Suggestions:

- Page 13, line 3: Suggested language was provided to replace current paragraph, “These considerations are inapplicable if take of eagles by a wind energy project is likely to result, in which case the developer should refer to the take permit requirements of CFR 22.26 and 22.27.”
- Use the term “likely to result” consistently throughout the Guidelines.
- Following the same logic used in the organization of the Endangered Species Act section, the discussion should be moved to page 10.

FWS Response (D. Cottingham, J. Ford): FWS will edit the Guidelines to mirror the language from the 2009 eagle rule, and will consider where best to include this information within the Guidelines. FWS will provide further clarification that if a project is likely to take eagles, developers should apply for a permit.

Other Topics

Summary: FWS addressed any remaining concerns raised by the FAC. For the purpose of clarity, the FWS response has been included under each discussion point below.

- The FAC’s recommended communications protocol made clear that the nature of discussions between FWS and the developer should be productive back-and-forth rather than semi-threatening law enforcement statements. FWS should ensure that key concepts such as this are not left out of the Communications Protocol.

FWS Response: FWS will review the FAC recommended protocol to see whether any additional concepts should be added to the FWS Communications Protocol.

- Page 13, Line 26: A FAC member recommended inserting “insufficient adherence to Guidelines” to replace “compliance with Guidelines.”

FWS Response: FWS will ensure that the term “compliance” is not used in any inappropriate context throughout the Guidelines.

- Page 21, lines 16 and 24: The term “coordinate” is used in several instances where the term “communicate” should be used instead.

FWS Response: FWS understands the sensitivities related to using the term “coordinate” and will evaluate the appropriateness of its use throughout the Guidelines.

- Page 23: Ensure that the section on coordinating with other federal agencies clarifies that this should be done by developers when applicable.
- Page 35, lines 19-28 and page 36, lines 1-6: The first potential outcome of Tier 2 is problematic because most of the information needed would not be available at Tier 2. May be more appropriate to include at Tier 3.

FWS Response: FWS will consider whether to move this discussion.

DAY 2 PUBLIC COMMENT

Kelly Fuller, American Bird Conservancy (ABC)

Thank you to FWS and DOI for this opportunity to comment. Thank you to both entities for the current eagle guidance which ABC largely supported in its public comments. Regarding best management practices, my organization recommended we go back to the FWS version rather than the FAC version and we were glad to see those changes. Listening to what was said about that today, we're going to have to think about what the ultimate use of the land it's going back to regarding BMPs, as well as private versus public lands. For instance, if the land is going back to corn and soybeans, then it's not as important that you have the foundation come out. If the intent is for land to go to conservation use, you wouldn't be able to revegetate if you only go down three feet. We should give flexibility and be sensitive to costs, but you don't want the only option after decommissioning to be conversion to agricultural land. I have two questions: 1) What feedback have you received from the Department of Justice (DOJ) in regards to the enforcement discretion language; and 2) What metrics will FWS use to determine whether these Guidelines are successful?

FWS Response: FWS intends to circulate the enforcement discretion language that was agreed upon on our website as soon as possible.

FINAL FWS REMARKS (D.COTTINGHAM, J.FORD)

D. Cottingham described the Land-Based Wind Energy Guidelines as voluntary, but setting comprehensive standards in terms of process and substance. He thanked the FAC and the members of the public who have been involved in the development and review of these Guidelines over the past four years. He explained that the Department and FWS have gone beyond the typical process of releasing a single draft for public comment and then coming out with a final. FWS has engaged closely with the FAC and the public. He expressed his belief that the Guidelines, implemented by FWS with our partners, will benefit bird and bat conservation and maintain FWS conservation standards.

He reiterated that FWS will be on a fast track to finalizing the Guidelines, and will take public comments and notes from this meeting to develop the final draft that will be submitted to OMB for interagency review. Prior to submission to OMB, FWS will request a final internal review. FWS anticipates that the final review will result in few substantive changes.

J. Ford also thanked the FAC for their kindness, friendship, and diligence in completing a collaborative effort that was rocky at times. He also thanked FWS staff. He expressed his belief that the Guidelines are workable and ready to put into practice.

The meeting adjourned after FAC members also expressed their support for the final product, and exchanged thanks and well-wishes to FWS and one another.

AGENDA FOR
WIND TURBINE FEDERAL ADVISORY COMMITTEE
September 20-21, 2011
Savoy Suites Hotel, 2505 Wisconsin Ave, NW, Washington, DC, 20007

Tuesday September 20th

- | | |
|-------|---|
| 8:00 | Registration and Coffee |
| 8:30 | Welcome and Introductions –David Cottingham, Fish and Wildlife Service

Review of Agenda –Dr. Jonathan Raab, Facilitator |
| 8:45 | Overview of subcommittee process and results, and other comments received –David Cottingham, FWS |
| 9:15 | Overview of FWS Changes to Draft Wind Guidelines– David Cottingham, FWS |
| 9:45 | Clarifying Questions from Committee |
| 10:15 | Break |
| 10:30 | FAC opportunity to interact with Deputy Secretary David Hayes <ul style="list-style-type: none">• Opening comments by the Deputy Secretary• Comments from selected Committee members |

- Dialogue
- 12:00 Lunch
- 1:30 Initial Discussion of Specific Issues:
- Adaptive Management
 - Mitigation
 - Avian and Bat Protection Plans
 - Tiers 1-3
 - Tiers 4-5
 - Definitions/Glossary Changes
- 3:00 Break
- 3:15 Initial Discussion of Specific Issues
- Role of Service
 - Enforcement Discretion Language
 - Communications Protocol
 - Implementation of Guidelines (including training)
- 4:45 Public Comment
- 5:00 Discuss Priorities for Day 2 Morning Agenda
- 5:15 Adjourn

Wednesday September 21

Appendix A - Agenda

8:00	Registration and Coffee
8:30 to 12:00	Agenda for Morning TBD (at end of 20 th)
12:00	Lunch
2:00	Discuss any additional issues of concern
3:45	Break
4:00	Public Comment
4:30	Wrap-up and next steps – David Cottingham
5:00	Adjourn

WIND TURBINE GUIDELINES ADVISORY COMMITTEE MEETING SEPTEMBER 20-21, 2011

PARTICIPANT LIST

Attended In Person

Fatima Ahmad
U.S. Department of the Interior
1849 C Street NW
Washington, DC
(202) 208-1381
Fatima_Ahmad@ios.doi.gov

Taber Allison
American Wind Wildlife
Institute
208 South Great Road
Lincoln, Massachusetts 01773
781-259-2145
tallison@awwi.org

John M. Anderson
American Wind Energy
Association
1501 M St. NW, Suite 1000
Washington, DC 20005
202-383-2516
janderson@awea.org

Dick Anderson
California Energy Commission
2850 Layton Drive
Davis, California 95618
530-758-4672
danderson222@att.net

Abby S. Arnold
American Wind Wildlife
Institute
1110 Vermont Avenue, NW,
Suite 950
Washington, DC 20005
202.535.7800 x105
aarnold@awwi.org

Dan Ashe
USFWS

Michael Azeka
AES Wind Generation
4542 Ruffner Street, Suite 200
San Diego, California 92111-
2239
858-573-2018
mike.azeka@aes.com

Michael Bean
U.S. Department of the Interior
Washington, DC
202-208-4416
michael_bean@ios.doi.gov

Paola Bernazzani
ICF INTERNATIONAL
91 Carriage Stone Drive
Chagrin Falls, Ohio 44022
916.501.0921
PBernazzani@icfi.com

Kathy Boydston
Texas Parks and Wildlife
Department
4200 Smith School Road
Austin, Texas 78744-3291
512-389-4638
kathy.boydston@tpwd.state.tx.us

Larry Bright
U.S. Fish & Wildlife Service
4401 N. Fairfax Drive
Arlington, Virginia
703-358-2161
Larry_Bright@fws.gov

Travis A. Brown
PacifiCorp Energy
1407 W. North Temple, Suite
330
Salt Lake City, Utah 84116
801-220-2737
travis.brown@pacificorp.com

David Cottingham
U.S. Fish and Wildlife Service
Washington, DC
David_Cottingham@fws.gov

Richard Curry
CURRY & KERLINGER, LLC
1734 Susquehannock Drive
McLean, VA 22101
703-8231-1404
RCA1817@aol.com

Aimee Delach
Defenders of Wildlife
1130 17th Street, NW
Washington, DC 20036
202-772-0271
adelach@defenders.org

Samuel Enfield
MAP Royalty, Inc.
3000 El Camino Real
5 Palo Alto Square, Suite 700
Palo Alto, California 94306-
2122
650-543-5887
senfield@maproyalty.com

Julie Falkner
Defenders of Wildlife
1130 17th Street N.W.
Washington, DC 20036-4604
202-772-0293
jfalkner@defenders.org

Megan Feeney
USFWS

Jerome Ford
U.S. Fish and Wildlife Service
1849 C Street, NW
Washington, DC 20240
202-208-6017
Jerome_Ford@fws.gov

Appendix B – Participant List

Kelly Fuller
American Bird Conservancy
1731 Connecticut Ave. NW
Washington, DC 20009
(202) 234-7181
kfuller@abcbirds.org

Michele Gallagher
U.S. Fish & Wildlife Service
505-248-6878
Michele_Gallagher@fws.gov

J. Kabir Green
Natural Resources Defense
Council
4815 43rd Street NW
Washington, DC 20015
917.502.2189
kgreen@nrdc.org

Sarah Greenberger
DOI
Sarah.Greenberger@sol.doi.gov

Joseph F. Grennan
RES Americas Inc.
11101 West 120th Avenue, Suite
400
Broomfield, Colorado 80021
303-439-4281
joe.grennan@res-americas.com

Betsy Hildebrandt
USFWS

Michelle L. Holiday
Edison International
555 12th St., NW, Suite 640
Washington, DC 20004
202-393-3075
michelle.holiday@edisonintl.com

Nick Juliano
Platts Inside Energy
1200 G St NW, Suite 1000
Washington, DC 20005
202-383-2243
nicholas_juliano@platts.com

Sandy Kratville
US Forest Service
WFWARP; 3 SE MailStop
1121, 201 14th St. SW
Washington, DC 20250
202.205.1281
spkratville@fs.fed.us

Leo Lentsch
ICF INTERNATIONAL
620 Folsom Street, #200
San Francisco, California 94107
843.693.8264
LLentsch@icfi.com

Steve Lindenberg
Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585
202-586-2783
steve.lindenberg@ee.doe.gov

Cade London
U.S. Fish and Wildlife Service
4401 N. Fairfax Drive
Arlington, Virginia
Cade_London@fws.gov

Rachel London
U.S. Fish and Wildlife Service
4401 North Fairfax Drive
Room 840
Arlington, Virginia 22203
703-358-2491
Rachel_London@fws.gov

Robert Manes
The Nature Conservancy, Kansas
P.O. Box 285
Ellsworth, Kansas 67439
620-388-1940
rmanes@TNC.org

Winifred Perkins
Next Era Energy Resources
700 Universe Boulevard
Juno Beach, Florida 33408
561-691-7046
Winifred_Perkins@nexteraenergy.com

Joyce Pickle
HDR Engineering, Inc.
701 Xenia Avenue South, Ste 600
(763) 591-5443
joyce.pickle@hdrinc.com

Martin D. Piorkowski
Cornell Lab of Ornithology
11 Cardinal Drive
Ithaca, New York 14850
607-254-2119
mp362@cornell.edu

Marcia Pradines
U.S. Fish & Wildlife Service
4501 N. Fairfax Drive
Arlington, Virginia 22203
703-358-2021
Marcia_Pradines@fws.gov

Steven Quarles
Crowell & Moring LLP
1001 Pennsylvania Avenue, NW
Washington, DC 20004-2595
202-624-2665
squarles@crowell.com

Johnathan Raab
Raab Associates, Ltd. (and MIT)
118 South Street, #3A
Boston, Massachusetts 02111
617-350-5544
raab@raabassociates.org

Maria Race
Midwest Generation
Edison Mission Energy
235 Remington, Suite A
Bolingbrook, Illinois 60440
630 771 7862
mrace@mwgen.com

Rich Rayhill
Boise, Idaho 83702
208-841-5037
richrayhill@gmail.com

Casey Reeves
Bureau of Land Management
20 M st SE
Washington, DC 20003
2029127503
creeves@blm.gov

Robert Robel
Kansas State University
116 Ackert Hall
Manhattan, Kansas 66506-4901
785-532-6644
rjrobel@ksu.edu

Lee Robertson
Tetra Tech
20251 Century Blvd. suite 200
Germantown, MD 20874
301 528 3084
lee.robertson@tetrattech.com

Lara Rozzell
Idaho Conservation League
P.O. Box 844
Boise, Idaho 83701
208 345 6933 x 31
lrozzell@idahoconservation.org

Jason Rylander
Defenders of Wildlife
1130 17th Street, NW
Washington, DC 20036
202-772-3245
jrylander@defenders.org

Ruchi Sadhir
Department of the Interior
1849 C Street NW, Room 6127
Washington, DC 20240
202-208-5379
ruchi_sadhir@ios.doi.gov

Meghan Sadlowski
USFWS
4401 N Fairfax Dr, Arlington,
Virginia 22203
(703) 358-2218
meghan_sadlowski@fws.gov

Jeff Simmons
Normandeau Associates, Inc.
80 Leighton Road, Suite C
Falmouth, Maine 04105
207-797-7717, x102
jsimmons@normandeau.com

Mark Sinclair
Clean Energy States
Alliance/Clean Energy Group
50 State Street, Suite 1
Montpelier, Vermont 05602
802-223-2554 x206
msinclair@cleanegroup.org

Jaime Steve
Pattern Energy
1455 Pennsylvania Ave., NW,
Ste 400
Washington, DC 20004
jaime.steve@patternenergy.com

Ryan Stroschein
Green Capitol
rstroschein@greencapitol.net

Genevieve Thompson
Audubon Dakota
118 Broadway Suite 512
Fargo, North Dakota 58102
701-298-3373
gthompson@audubon.org

Patrick D. Traylor
Hogan Lovells
Columbia Square
555 13th Street, NW
Washington, DC 20004
202-637-6866
patrick.traylor@hoganlovells.com

Katie Umekubo
NRDC
1200 New York Ave., NW, Suite
400
Washington, DC 20005
202-717-8194
kumekubo@nrdc.org

Jeff Underwood
U.S. Fish and Wildlife Service
300 Westgate Center Drive
Hadley, Massachusetts 01035
413-253-8408
Jeff_Underwood@fws.gov

David J. van Hoogstraten
BP Wind Energy North America
Inc.
1101 New York Avenue, Ste 700
Washington, DC 20005
202-277-5840
david.vanhoog@bp.com

Tom Vinson
American Wind Energy
Association
1501 M Street, NW
Washington, DC 20005
202-383-2535
tvinson@awea.org

Allison Vogt
Association of Fish & Wildlife
Agencies
444 North Capitol Street, NW
Suite 725
Washington, DC 20001
202.624.3641
AVogt@fishwildlife.org

James R. Woehr
BOEMRE
381 Elden St., MS 4080
Herndon, Virginia 20170
703-787-1732
James.Woehr@boemre.gov

Mike Young
US Department of Interior
(202) 208-3449
Michael.Young@sol.doi.gov

Attended Via Webcast

Matthew Alexander
Ecology and Environment, Inc.
333 SW Fifth Avenue, Suite 600
Portland, Oregon 97204
503-248-5600
malexander@ene.com

Anne Ardillo
EPA
75 Hawthorne Street
San Francisco, California 94105
415-947-4257
ardillo.anne@epamail.epa.gov

Kelly Bakayza
DOI Office of the Solicitor
Three Parkway Center, Ste 385
Pittsburgh, Pennsylvania 15220
412.937.4006
Kelly.Bakayza@sol.doi.gov

Rick Bergman
Aquila Wind Development
P O Box 170170
Glendale, Wisconsin 53217
414-962-9000
rcbww@wi.rr.com

Ashleigh Blackford
U.S. Fish & Wildlife Service
2493 Portola Road Suite B
Ventura, California 93003
805-644-1766
ashleigh_blackford@fws.gov

Omar Bocanegra
U.S. Fish and Wildlife Service
711 Stadium Drive
Arlington, Texas 76011
817-277-1100
Omar_Bocanegra@fws.gov

René Braud
EDP Renewables, North America
808 Travis, Suite 700
Houston, Texas 77002
713-265-0350
rene@braud.com

Kim Brown
Ventus Environmental Solutions
3522 SW Kanan Dr.
Portland, OR 97221
503 950 3232
brownki@vcn.com

Buffalo Bruce
Western Nebraska Resources
Council
P.O. Box 612
Chadron, Nebraska 69337
(308) 432-3458
buffalobruce1@gmail.com

Michael Carlson
MEC Environmental Consulting
1003 Amelia Avenue
Royal Oak, Michigan 48073
248-585-3800
mecec@comcast.net

Don Claussen
Duke Energy Top of the World
Wind Power LLC
849 St HWY 95
Glenrock, Wyoming 82637
307-995-4766
don.claussen@duke-energy.com

L. Caitlin Coberly
Merlin Environmental, LLC
12400 198th Ave NW
Fox Holm, North Dakota 58718
701-468-5996
kate_coberly@merlinenv.com

Richard M. Cogen
Nixon Peabody LLP
437 Madison Avenue
New York, New York
(212) 493-6639
rcogen@nixonpeabody.com

Ben Cowan
Locke Lord Bissell & Liddell
LLP
2800 Chase Tower, 600 Travis
Street
Houston, Texas 77002
713-226-1339
bcowan@lockelord.com

Sue Cowell
Chadbourne & Parke, LLP
200 New Hampshire Ave, NW
Washington, DC 20036
202-974-5644
scowell@chadbourne.com

Jenny Davenport
DeTect, Inc
1902 Wilson Ave
Panama City, Florida 32405
865-850-0165
jenny.davenport@detect-inc.com

Shannon Deaton
Division of Inland Fisheries
1721 Mail Service Center
Raleigh, North Carolina 27699
919-707-0222
shannon.deaton@ncwildlife.org

Ned Dikmen
1032 North Lasalle
Chicago, Illinois 60610
312-266-8400
ndikmen@greatlakesboating.com

Hillary Dobson
Oregon Department of Energy
625 Marion Street NE
Salem, OR 97301
(503) 378-4041
hillary.dobson@state.or.us

Kara Donohue
Southern California Edison
1218 S Fifth St
Monrovia, California 60610
626-462-8613
kara.donohue@sce.com

Debbie Evans
Energy Committee, Sierra Club,
Florida Chapter
dbeinwpbfl@aol.com

Pete Feigley
Absaroka Ecological Consulting
306 West Montana Street
Livingston, Montana 59047
406-222-1743
absaroka@bresnan.net

Kevin Garlick
U.S. Fish and Wildlife Service
Arl Sq 510C
Arlington, Virginia 22203
703-358-1949
Kevin_Garlick@fws.gov

Brandy Gibson
BP Wind Energy
700 Louisiana St., 33rd Floor
Houston, Texas 77002
713-354-2160
brandy.gibson@bp.com

Gene Grace
AWEA
1501 M Street
Washington, DC 20005
202657-7434
GGrace@awea.org

Jennifer Harris
Ecology and Environment, Inc.
1501 Lee Highway, Suite 306
Arlington, Virginia 22209
703-522-6065
Jharris@ene.com

Andrew Hartzell
O'Neil LLP
19900 MacArthur Blvd. Suite
1050
Irvine, California 92612
949 798-0714
AHARTZELL@ONEIL-LLP.COM

Joan Heredia
Enel Green Power
7777 Fay Avenue, Suite 200
La Jolla, CA 92037
858-731-5037
joan.heredia@enel.com

Aaron Heun
Berrendo Energy
1871 Folsom St, Suite 104
Boulder, Colorado 80302
(303) 415-0140
aaron.heun@berrendoenergy.com

Appendix B – Participant List

Michael Horn
GE Energy
1 River Road
Schenectady, New York 12345
518-385-5814
michael.horn@ge.com

Tamara Johnson
USFWS-Georgia Field Office
105 Westpark Drive, Suite D
Athens, GA 30606
706-613-9493 ext. 226
Tamara_Johnson@fws.gov

Scott Kamber
TRC Environmental Corporation
605 Skyline Dr
Laramie, Wyoming 82070
307-742-3843
skamber@trcsolutions.com

Eric Kershner
U.S. Fish & Wildlife Service
6010 Hidden Valley Rd, Suite
100
Carlsbad, California 92011
760-431-9440 x214
eric_kershner@fws.gov

Heather Kieweg
Applied Ecological Services
21938 Mushtown Road
Prior Lake, Minnesota 55372
952-447-1919
heather.kieweg@appliedeco.com

Robyn Kullas
NexGen Energy Partners
12303 Airport Way
Broomfield, Colorado 80021
303.440.6262
r.kullas@nexgen-
energypartners.com

Anne Lacy
International Crane Foundation
E11376 Shady Lane Rd
Baraboo, Wisconsin 53913
608.356.9462 x146
anne@savingcranes.org

Gregory Lampman
NYSERDA
(518) 862-1090 ext. 3372
ggl@nyserda.org

Nick Livesay
Pierce Atwood LLP
One Monument Square
Portland, Maine 04101
207-791-1281
nlivesay@pierceatwood.com

Kimberly Long
Exelon Power
300 Exelon Way
Kennett Square, PA 19348
(610) 765-5572
Kimberly.Long@exeloncorp.com

Trace Megenbier
Oregon Department of Energy
625 Marion St. NE
Salem, Oregon 97301
503-378-4298
Trace.Megenbier@odoe.state.or.us

Kathleen Miller
TetraTech
18 Mallard Drive
Gorham, Maine 04038
207.893.1262
kathleen.miller@tetrattech.com

Tim Morgan
ESA|Energy
1425 North McDowell Blvd, Suit
200
Petaluma, California 94954
707-795-0903
tmorgan@esassoc.com

Eric D. Myers
Duke Energy
550 South Tryon Street
Charlotte, NC 28201
704-382-7891
eric.myers@duke-energy.com

Sue Oliver
Oregon Department of Energy
395 E. Highland Ave.
Hermiston, Oregon 97838
541-567-3840 (Ext. 225)
sue.oliver@state.or.us

Lauren Prince
Renewable Northwest Project
917 SW Oak Street, Suite 303
Portland, Oregon 97205
503.223.4544
Lauren@rnp.org

David Reinke
Shell Canada Limited
400 - 4th Avenue SW
Calgary, Alberta Canada
403 691 3440
david.reinke@shell.com

Rhonda Roff
Save It Now, Glades!
marshmaid@gmail.com

Jeff Rutland
Southwestern Power Group II
3610 North 44th Street, Suite 250
Phoenix, Arizona 85018
(602) 808-2004
jrutland@southwesternpower.com

Denise Sale
PPL Renewable Energy, LLC
Two North Ninth Street
Allentown, PA 18101
610-774-4689
dysale@pplweb.com

Mark Sedlacek
Los Angeles Department of
Water and Power
111 N Hope St, Room 1050
Los Angeles, California 90012
(213) 367-0403
Mark.Sedlacek@ladwp.com

Lynn Sharp
Tetra Tech EC, Inc.
1750 SW Harbor Way, Ste 400
Portland, Oregon 97201
503-222-4546
lynn.sharp@tetrattech.com

Daniel Shepard
Little River Band of Ottawa
Indians
375 River St
Manistee, MI 49660
231-398-6810
dshepard@lrboi.com

Dan Silver
Endangered Species League
4824 Santa Monica Blvd
Ste A 592
Los Angeles, California 90069
219-804-2750
dsilverla@me.com

Appendix B – Participant List

Mark Skolnicki
Black Swamp Bird Observatory
Oak Harbor, Ohio
mskolnicki@bex.net

Jennifer Spegon
U.S. Fish and Wildlife Service
1011 E tudor rd
Anchorage, Alaska 99503
907-786-3509
jennifer_spegon@fws.gov

Nicole Squires
Chapman and Cutler llp
201 South Main Street, Suite
2000
Salt Lake City, Utah 84111
801.320.6720
squires@chapman.com

Judd Stark
Catena Consulting, LLC
1101 Strawberry Ave
Billings, Montana 59105
406-671-3961
jstark@catenaconsulting.com

Dale Strickland
Western EcoSystems
Technology, Inc.
2003 Central Avenue
Cheyenne, Wyoming 82001
307-634-1756
dstrickland@west-inc.com

Todd Sumner
Greenberg Traurig, P.A.
101 East College Avenue
Tallahassee, Florida 32301
850.425.8544
Sumnerl@gtlaw.com

Shruti Suresh
Meyer Glitzenstein
1601 Connecticut Avenue NW,
Suite 700
Washington, DC 20037
202-588-5206
Ssuresh@meyerglitz.com

Lucy Triffleman
Westervelt Ecological Services
600 North Market Suite #3
Sacramento, California 95834
916-943-6480
ltriffleman@westervelt.com

Karen Tyrell
BHE Environmental, Inc.
11733 Chesterdale Road
Cincinnati, Ohio 45246
513-326-1500
ktyrell@bheenvironmental.com

Jim Whalen
East County Renewables
Coalition
1660 Hotel Circle N., Suite 725
San Diego, California 92108
619-683-5544
jim@jwhalen.net,
cmcgee@jwhalen.net

Erin Wiedower
Akuo Energy
150 N Michigan Avenue
Chicago, Illinois 60601
312-291-4647
wiedower@akuoenergy.com

Rick Williams
Cardno ENTRIX
701 University Avenue, Ste 200
Sacramento, California 95825
916-386-3816
rick.williams@cardno.com

Dominick Yacono
NAVY REGION MID-
ATLANTIC
1510 Gilbert Street, RM 204
NORFOLK, Virginia 23511
757-444-1395
dominick.yacono@navy.mil

Meghan Yates
EverPower
70 NW Couch St., Suite 405
Portland, Oregon 97209
(503) 928-5504
myates@everpower.co



September 13 Draft Land-Based Wind Energy Guidelines: *Summary of Major Changes*

September 20, 2011

David Cottingham

U.S. Fish and Wildlife Service

Background

- 3/4/10: FAC submitted recommendations to DOI
- 2/8/11: FWS published draft Wind Energy Guidelines (WEG) for public comment
- 7/12/11: FWS releases 2nd Draft WEG in advance of 7/21-22 FAC meeting
- 8/23/11: FAC Subcommittees formed at the July meeting present recommendations to full FAC
- 9/13/11: FWS releases 3rd Draft WEG in advance of 9/21-22 FAC meeting

Changes from July 12 Draft WEG

- FWS developed the September 13 Draft WEG based on:
 - Public comment
 - FAC recommendations
 - Internal FWS review
 - DOI review

Changes from July 12 Draft WEG

- FWS addressed the following comments raised:
 - Role of FWS
 - Definition of “Significant”
 - Adaptive Management
 - Mitigation
 - Phase-In of Guidelines
 - Habitat Fragmentation
 - Avian and Bat Protection Plans
 - Scale of Wind Energy Projects

Role of FWS

Comments Received:

- FAC - “Communications Protocol”
- Public comment:
 - Avoid “quasi-regulatory” requirements (e.g., FWS verification of developer plans or decisions)
 - FWS should adopt mandatory measures

Role of FWS

Revision Made:

- FWS has developed Table 1
- Outlines suggested communication between developer and FWS in each Tier

Definition of “Significant”

Comments Received:

- FAC - retain CEQ definition; delete references to federal wildlife laws
- Public comment:
 - Support for use of “significant” as a modifier
 - References to federal wildlife laws should be retained
- FWS Regions - CEQ regulatory definition is unclear in the context of these guidelines

Definition of “Significant”

Revision Made:

- Definition has been rewritten to better describe what will be taken into consideration when determining whether an impact is “significant”

Adaptive Management (AM)

Comments Received:

- FAC – Reinsert language from FAC recommendations emphasizing that AM would not be applied to most projects
- Public Comment:
 - AM should only be applied when impacts are greater than anticipated, and are significant
 - Greater clarity as to when AM would be applied is needed
 - FAC recommendations water down language

Adaptive Management (AM)

Revision Made:

- Used FAC recommended language, with modifications
- Tiered approach used in the Guidelines is adaptive management
- Further adaptive management, such as changes in operation, should be rare if proponents follow the Guidelines (i.e., select low-risk sites and use best management practices in project design, construction, and operation)

Mitigation

Comments Received:

- FAC – Insert introduction to Chapter; clarify that tools other than FWS 1981 Mitigation Policy are available
- Public Comment:
 - Clarify that mitigation is necessary only to avoid or minimize “significant adverse impacts”
 - FAC recommendation to adopt mitigation measures “to the greatest extent practicable for that project” weaken Guidelines

Mitigation

Revision Made:

- FWS did not accept FAC recommended language in full, but did clarify that:
 - Mitigation should address avoiding or minimizing significant adverse impacts, and when appropriate, compensating for unavoidable significant adverse impacts
 - Tools other than the FWS 1981 Mitigation Policy are available

Implementation of Guidelines

Comments Received:

- FAC – FWS should train staff and interested parties within 6 months of finalization of Guidelines
- Public Comment:
 - Phase-in period of at least one year needed to adjust to unforeseen challenges with implementation

Implementation of Guidelines

Revision Made:

- FWS will commit to beginning training within six months of finalization of Guidelines
- Decision stands that Guidelines will become final upon publication
- Term “phase-in” has been removed from text; training discussion moved under “Implementation”

Habitat Fragmentation

Comments Received:

- FAC – Reorganize Tiers 3, 4, and 5 so that Tier 4 addresses habitat fragmentation in addition to direct fatalities, rather than including habitat impacts in Tier 5. Add tables depicting decision process for conducting fatality and habitat studies.
- Public Comment:
 - Fatality monitoring should be kept in a Tier separated from habitat-related studies and research
 - Habitat studies appropriate for any project with a species of habitat fragmentation concern should be delineated from in-depth, research-type questions

Habitat Fragmentation

Revision Made:

- Accepted FAC recommendation to split Tier 4 into Tier 4a – fatality monitoring; and Tier 4b – habitat studies, with modifications
- Include consideration of rare plant communities (e.g., tall grass prairie) even when no species of habitat fragmentation concern are present

Avian and Bat Protection Plans

Comments Received:

- FAC recommended use of alternate term “Guidelines Performance Documentation” that could include, but not be limited to, ABPPs
- Public Comment:
 - Reference to “formal” documents such as ABPPs should be replaced with “wildlife and habitat due diligence records”
 - ABPPs are useful tools but their use should be at the discretion of the developer
 - FAC recommendation of “GPD” and its definition are problematic and weak the Guidelines

Avian and Bat Protection Plans

Revision Made:

- FWS retained use of the term ABPPs in the Guidelines because it is already in use and using a new term would create confusion
- Language added that clarifies that ABPPs are voluntary and that other materials may be provided to FWS as long as they contain relevant information

Next Steps

- FWS will accept public comment on the September 13 draft until September 23
- A final draft of the Land-Based Wind Energy Guidelines will be submitted to the Office of Management and Budget (OMB) by mid-October
- OMB will conduct an interagency review
- After addressing interagency comments, FWS will publish the final Guidelines in the *Federal Register* by the end of the calendar year.